Building Protection Systems, Inc. (BPSI) - ALPHA SENTRY ONE

GENERAL DESCRIPTION:

The Alpha Sentry One (ASO) is a U.S. Department of Homeland Security SAFETY Act Designated technology installed to monitor terrorist concerns of smaller venues such as a Commercial Office Building lobbies, perimeter protection and schools. Using the same sensory technology as the larger Building Sentry One, the ASO is limited to (2) or (4) sensors. If a toxin is detected, the ASO enacts a sequence of predetermined alerts and mechanical protocols to isolate toxins thus preventing continued distribution to prevent loss of life, preserve assets, and to provide an early warning system for first responders in the event of a targeted terrorist attack using chemical or radiological materials or an accidental release. The ASO is installed as an all-in-one full backbone system and can integrate directly into an existing Building Management System (BMS) or security command center. The ASO detects a defined spectrum of chemical contaminants and a wide library of radiological isotopes with sensitivity levels customized for each specific toxin. The ASO has been designed in modular fashion for a quick deployment with easy installation. No known similar systems exist. The Alpha Sentry One is a fully functioning "Next Generation" detection system that can integrate sensory technology into just about any market ready project. With embedded controls, logic, software, mechanical protocols and remote monitoring coupled with multiple security means, this system is designed to operate 24/7/365 in the absence of false positive readings.

TECHNICAL DESCRIPTION:

BPSI's Alpha Sentry One (ASO) is a COTS based system that detects a defined spectrum of toxic compounds and a 120+ library of radiological isotopes for smaller applications such as: perimeter protection, schools or building lobbies on a continuous 24/7/365 basis with virtually zero false positive alarms. Through the integration of programmable logic controllers and sensor arrays, linked to a PC infrastructure with multi-layer communications protocols, the Alpha Sentry One solution offers a dynamic set of customized security measures. The ASO's architecture mesh simply and easily with existing systems, in a seamless process that gives the end user superior detection protection.

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

	Biological	Chemical	Radiological
FIELD USE System	Top Tier	Second Tier	Second Tier
MOBILE Laboratory	Second Tier	Second Tier	Top Tier
DIAGNOSTIC Laboratory	Second Tier	Third Tier	Top Tier
ANALYTICAL Laboratory	Third Tier	Second Tier	Top Tier

Survey Source

Vendor Supplied Information

CONTACT INFORMATION

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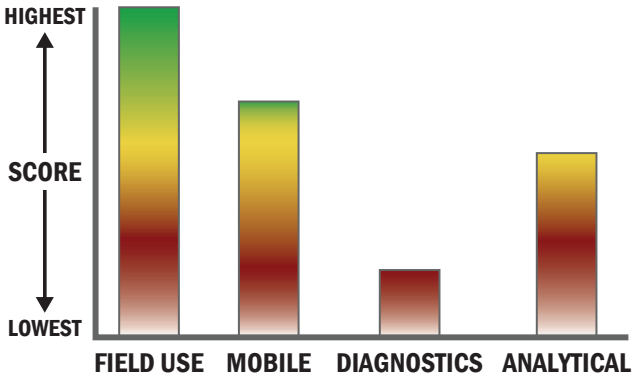
COST

- N/A/system
- $0/analysis

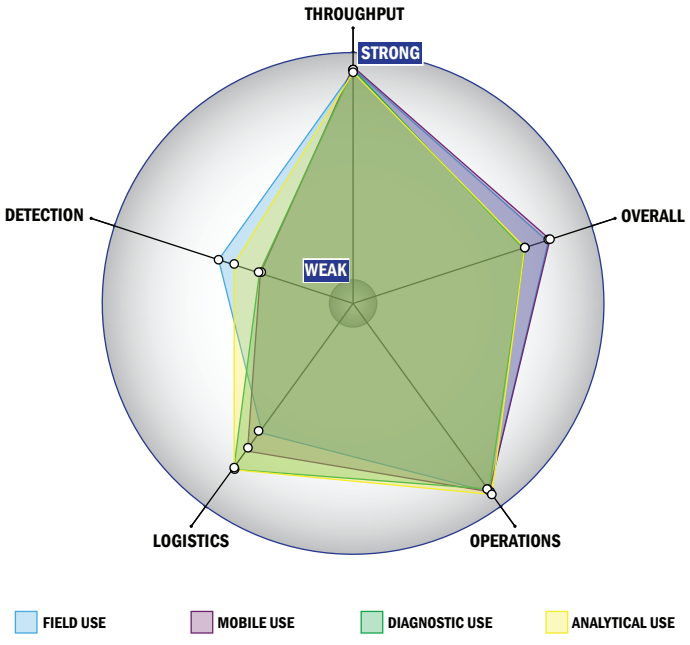
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



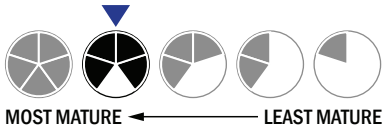
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- System is continuous and provides real time analysis with no defined tests/samples
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- No set-up of the system is required
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 1 and 5 kg
- Wired connections are available
- System or device has 110V electrical requirement



Operations:

- Can be used from 4 °C to 41 °C
- This system does not require consumable components
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is open and available for modification
- The system hardware is open and available for modification

Detection:

- Not possible for the system to achieve 510K clearance
- Not possible for the system to achieve FDA approval
- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Add on capability that is full or semi-automated for spore lysis
- $1x10^{-6}$ - $3x10^{-5}$ mg/m^3
- System currently can identify aerosolized chemical agent
- Not possible to identify liquid chemical agent
- Total dose, dose rate and count rate
- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- Area air sampling